DISTRICT OF COLUMBIA
TRAFFIC CALMING
POLICIES AND GUIDELINES

2002

District Department of Transportation

Dan Tangherlini, Acting Director

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Anthony A. Williams, Mayor

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INTRODUCTION

Traffic calming is a traffic management strategy that involves the combination of physical and traffic control measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street and road users. In most neighborhoods, residents are concerned about their safety as well as the quality of life that is the result of vehicle noise, speeding and cut-through traffic, exhaust emissions, traffic-induced residential vibrations and limited availability of curb parking. The District of Columbia is committed to reducing the negative impact of traffic and to ensuring the overall safety and livability of residential neighborhoods. The *District of Columbia Traffic Calming Policies and Guidelines* provides a structured process for involving the community in implementing solutions for residential traffic problems that can be mitigated by traffic calming measures. The following policies and guidelines form the basis of the process citizens should use to cause the city to initiate traffic calming investigations. These guidelines have been reviewed by several District of Columbia Division of Transportation (DDOT) administrations, including the Transportation Policy and Planning Administration (TPPA) and the Traffic Services Administration (TSA).

Any questions or requests regarding this program should be directed to TPPA at (202) 671-2730.

DEFINITIONS

Arterials **–** Roadways that conduct vehicular traffic between collector streets and highways. Traffic is supposed to move on a sequence through the hierarchy of streets: residential to collector arterial to highway, and then back down the hierarchy.

ANC - Advisory Neighborhood Commissions

Collector Streets – The intermediary streets that funnel vehicular traffic from residential streets to arterials and back. They are typically 40 feet wide.

Cut-through traffic – Through traffic diverted from arterial and collector streets onto local residential streets to avoid congestion.

DDOT - District Department of Transportation

Level-of-Service – A qualitative measure describing operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. It ranges from A to F as shown in the table below:

Level of Service	General Operating Conditions
A	Free flow
B	Reasonable free flow
C	Stable flow
D	Approaching unstable flow
E	Unstable flow
F	Breakdown flow

Note: Specific definitions of levels–of–service A through F vary by facility type.

Median – An island in the center of a street or intersection to protect pedestrians and provide landscaping. Medians prevent passing and left turns, separate opposing travel lanes and provide visual enhancement.

Signage – Traffic and roadway signs

Speed Study **–** A study using equipment to measure, collect and statistically analyze the speeds of vehicles.

Study Area – The boundary of the problem area, which may cross traditional neighborhood boundaries.

Traffic Calming – Methods used to reduce vehicular speed and volume and increase the sharing of streets by pedestrians and other users. Generally refers to physical measures and roadway design changes but enforcement and education can be components.

Traffic Calming Measure – An element of a traffic calming plan selected from among available and appropriate devices.

Median Slow Points – Center-located barriers dividing opposing roadway travel lanes at either intersections or midblock.

Traffic Calming Study – An appraisal of traffic conditions and the development of a plan for implementing one or more traffic calming devices.

Warrants – The minimum criteria necessary to call for a roadway solution, such as installation of a stop sign or traffic calming device. These criteria are outlined in both federal and local engineering manuals and standards. Typically required are objective measures such as speed surveys, traffic volume studies and accident records.

85th Percentile Speed – The speed at or below which 85% of the vehicles are moving.

OBJECTIVES

The overall objectives of the *District of Columbia Traffic Calming Policies and Guidelines* are to maintain the livability and environmental quality of our neighborhoods while ensuring the safe, efficient and economical movement of persons and goods. The more detailed objectives are:

- Involving residents and stakeholders (ANC's, police, fire & emergency services, etc.) in the decision-making processes in all phases of traffic calming activities.
- Striving to meet the goals, objectives and policies contained in the Transportation Plan for the District of Columbia.
- Promoting conditions that provide safe neighborhoods for motorists, bicyclists, pedestrians and residents while maintaining access and services to the neighborhood.

POLICIES

The following policies are established as part of the *District of Columbia Traffic Calming Policies and Guidelines*:

- All requests for traffic calming measures shall be initiated by the residents of the area in coordination with the local ANC.

- All requests shall be in the form of a formal application submitted on the "Request for Traffic Calming Study" form, obtainable from DDOT by calling (202) 671-2730 or on DDOT's website at www.ddot.dc.gov

- Completed applications should be sent to:
  Traffic Calming Program Coordinator
  Transportation Policy and Planning Administration, DDOT

2000 14th Street, NW, 7th Floor, Washington, DC 20009

- Each request for traffic calming installation shall contain a list of signatures and addresses of residents in the block or blocks where installation is desired.

- Through traffic should be encouraged to use higher classification streets (i.e. arterial and collector streets), as designated in the Transportation Plan for District of Columbia.

- In areas where speeding is determined to be a problem, traffic calming measures should result in the reduction of speeds.

- Ingress and egress of police and emergency vehicles must be maintained or not substantially hindered.

- Arterial and collector streets should not be considered for any physical traffic calming measures.

- The final location of traffic calming installations (and whether they will be installed at all) shall be determined by DDOT.

- The design of traffic calming measures should reflect the requirements of pedestrians, including senior citizens, children and local residents.

- The application of standard traffic control devices, use of synchronized traffic signals, provision of bus preemption at designated traffic signal locations and the use of other Intelligent Transportation Systems (ITS) should be encouraged.

- Traffic calming measures should not result in a significant reduction of the capacity of intersections and roadways where they are placed.
- Traffic calming solutions for identified problems should be cost-effective.

- Traffic calming measures shall conform to engineering and procedural standards established by DDOT.

- DDOT shall be responsible for conducting traffic calming studies and making recommendations for implementation.

- A traffic calming study shall be the basis for deciding the appropriate measure(s) for a situation.

- DDOT may consider the deployment of a traffic calming measure on a trial basis. All such deployments should be evaluated for effectiveness within three (3) months of installation.

- Only traffic calming measures approved by DDOT shall be considered for implementation in the City.

GUIDELINES

The Transportation Policy and Planning Administration (TPPA) and Traffic Services Administration (TSA) shall recommend traffic calming measure(s) based on a traffic calming study that will consider the guidelines (or criteria) outlined below. TSA shall review and approve the traffic calming recommendations provided in the study. Periodically, TPPA and TSA will review these guidelines to determine whether they are appropriate for current conditions.

- Traffic calming measures implemented at intersections and on roadways shall not result in lowering the overall level of service below "D".

- Physical traffic calming measures (such as speed bumps/humps) should generally not be considered on:

    (i) Emergency and evacuation routes
    (ii) Roadways with grades of 7% or more
    (iii) Arterials or collector streets
    (iv) Through truck routes

- TPPA shall conduct a traffic calming study if at least 35% of residents in the problem area support such a request with the concurrence of the area's ANC.

- The implementation of any traffic calming measure should have the support of at least 65% of the residents within the study area with the concurrence of the area's ANC.

- Traffic calming measures should be considered if the average daily traffic (ADT) exceeds 1,500 vehicles per day (vpd) or if the peak hour volume is greater than 150 vehicles for the roadway. However, if the ADT exceeds 5,000 vpd, traffic calming measures should not be considered.

- When the 85th percentile speed on a street segment exceeds the posted speed limit by at least 10 mph, traffic calming measures should be considered.

- Traffic calming measures shall have no significant adverse impact on fire, police and ambulance services.

- DDOT officials shall define the study area based on the traffic calming application submitted, in collaboration with the ANC.

- Traffic calming measures could be justified if cut-through volumes represent at least 30% of the total daily traffic for local streets

- Crash (accident) data for the most recent three years should be analyzed by type, severity, location, roadway condition, and time of crash. Accident rates should be considered significant when there are 3 or more reported cases involving pedestrian, bicycle and automobiles along a local residential street within a one year period.

- In cases where parking may have to be removed, the effect(s) on other parking facilities within the neighborhood as well as alterations to traffic patterns should be analyzed.

TRAFFIC CALMING PROCESS

(1) Request Procedure

Requests for a traffic calming study must be initiated through ANC's (and with their concurrence) with the support of at least 35% of the households on the block(s) where the device is requested. A formal request should be submitted using the form attached on page A-1 (see center pages).

Within four (4) weeks after submittal of a complete application, DDOT and the ANC shall organize a neighborhood meeting where traffic problems, issues and solutions shall be discussed. DDOT shall address possible solutions to traffic problem(s) and offer residents the opportunity

to provide their input on the traffic calming study, scope of work and proposed study area.

(2) Traffic Calming Study

A traffic engineering study shall be conducted by DDOT or a consultant appointed by DDOT. This shall involve study area determination, data collection and analyses. A report summarizing findings on the following parameters should be submitted to DDOT for review:

- Vehicular volume
- Speeds
- Cut through traffic
- Crash rates
- Road alignment and grade
- Street or segment classification
- Parking
- Pedestrian activities
- Other physical conditions on roadway or segment.

The report should also contain recommendations on traffic calming solutions.

(3) Concurrence on Measure and Location

DDOT staff shall present their findings of the traffic study to the community in a meeting. These recommendations could include other possible solution(s) which were not requested but may be warranted based on the factors surrounding each case. Residents will be given the opportunity to air their views during the meeting. DDOT and the residents should then work towards a consensus (at least 65% of study area households) on the most appropriate traffic calming measure(s) and specific location(s) based on the recommendations from the traffic calming study. The deliberation must be concluded with a written notice of acceptance prepared by the ANC and signed by appropriate officers. However, if a consensus is not reached, DDOT will use its discretion in deciding whether or not to proceed with implementation based on the traffic calming study's recommendations and community comments.

(4) Approval Process

The legitimacy of a traffic calming measure is determined by the needs expressed by the community and validated by a traffic engineering study. However, all qualified projects must fit into the capital improvement budget of the DDOT. Thus, legitimacy does not guarantee installation in time envisioned by citizens. DDOT may approve a recommended traffic

calming measure or solution based on budget and cost considerations. Since the capital improvement budget for any year is based on projects identified in previous years, funding for implementing approved traffic calming measures may have to be appropriated in the budget in the following fiscal year. In addition, traffic calming projects shall fit into the priority schemes for the capital improvement budget. Thus, funding availability and timing are critical in the implementation of a traffic calming measure. DDOT will assess the chance of implementation during a specific fiscal year and notify the ANC accordingly. Where possible, DDOT should make the effort to include traffic calming among the priority projects.

(5) Design and Implementation

When a traffic calming measure is programmed into the capital budget, DDOT shall schedule and proceed with the design and implementation. The designs would follow all nationally recognized standards (e.g. MUTCD, HCM, ITE, AASHTO guidelines, etc.), and other traffic engineering standards for the District of Columbia.

Some measures may be installed on a temporary basis for a particular "test period". These temporary measures should be considered if traffic flow may be severely reduced by the installation of permanent measures. Following the temporary installation period, the ANC and DDOT must decide whether to install the measure on a permanent basis. This decision should be made after the measure has been monitored and evaluated regarding its effectiveness in solving the identified traffic problem.

(6) Monitoring and Evaluation

The "test period" for monitoring and evaluating traffic calming measures should usually be between 3 - 6 months, although in some cases a twelve-month duration may be required. This period (in some cases) should be extended into the snow season, if possible, in order to provide the opportunity to detect any snow removal (or snow related) problems that may exist due to the installation of the measure.

During this period, DDOT shall evaluate residents' and motorists' reactions, conduct field observations, perform traffic counts, speed studies, and collect and analyze other data as needed. The analysis of the data collected should determine whether the measure or solution has met its desired objective. If the traffic calming measure does not meet the desired or intended objective based on the analyses or other factors, DDOT should notify the ANC about removal. Alternative solutions may be considered.

After installation, monitoring and evaluation of a traffic calming measure, a follow-up traffic study may be conducted. This study may help in the decision-making process on similar measures to be deployed in other areas of the City. Follow-up studies may also help explain the reasons why some residents or motorists may resist a particular measure.

(7) Modification or Removal of Traffic Calming Measures

With a broad support of the neighborhood (at least 75% of households), DDOT would consider the removal or modification of a traffic calming measure if it fails to meet the intended objective or if it leads to the development of unsafe traffic operations. The removal or modification should also be based on analyses conducted after installation, that is, during the monitoring and evaluation stage.

A formal request for the removal of a traffic calming measure(s) should be submitted using the form on page A-2 (see center pages).

RATING, RANKING AND SELECTION OF PROJECTS

A rating system, as outlined in Table 1, will be utilized to enable competing traffic calming projects to be ranked in relation to budget constraints, and anticipated benefits. This ranking system will consider total points and project costs if multiple projects compete for traffic calming funds. Each roadway will be analyzed individually within the study area according to the criteria listed below. The points will be assigned based on information gathered in the traffic calming study which will be presented in the report. DDOT shall perform this ranking based on the submitted report. Only the traffic calming projects which have been approved for implementation will be ranked. DDOT will use its discretion to:

- identify a minimum scoring threshold for qualifying a traffic calming project for implementation based on the rating system in Table 1
- balance projects among the eight (8) wards in the District
- rank projects which involve the installation of physical measures in areas under construction or programmed for construction within a reasonable time frame.

The request date will be the basis for breaking ties with the earlier request taking precedence.

TABLE 1: Criteria for Rating Projects

Criteria	Maximum Points	Basis
Speed (85th % tile)	30	5 pts for every 5 mph over posted speed limit
Volume	20	ADT divided by 100
Accidents	15	1 pt for each crash/year at one location
School Crossing	10	2 pts if children must cross street to get to school
Residential Density	10	1 pt for every 150 dwelling units/sq mile of study area
Pedestrian Generators	5	1 pt each for up to five pedestrian generating facilities in or near project street
No Sidewalks	10	5 pts if no continuous sidewalk, and 5 pts if pedestrian traffic volume is considered high
Total Possible Points	100	

TRAFFIC CALMING MEASURES APPROVED FOR USE IN THE CITY

The following physical traffic calming measures, defined below, may be installed in residential neighborhoods in the District of Columbia. Some of these measures are shown in the figures presented in Appendix B. Other measures including turn prohibitions, striping, addition of bicycle lanes, etc., may also be considered in addition to those listed below.

Bulb-out – An extension of a curb in the form of a bulb, usually at an intersection, that narrows the vehicular pathway and inhibits fast turns. Also called *Curb Extension* or *Neckdown*.

Chicane – A series of fixed objects, usually extensions of the curb, which alter a straight roadway into a zigzag or serpentine path to slow vehicles.

Choker –A narrowing of the fixed street, often in mid-block and sometimes near an intersection. May be done with curb extensions, landscaping or islands in the street.

Circle – A small circular island, usually less than 26 ft in diameter, used in the middle of intersections and intended to force vehicular traffic to slow and negotiate around it. When used in residential areas, they can be

landscaped for aesthetic or barrier purposes, and may have mountable curbs to facilitate movement of emergency vehicles.

Cul–de-Sacs/Full Street Closures - Full street closures are barriers placed across an entire width of street to completely close the street to through-traffic, usually leaving only sidewalks open. They are also referred to as cul-de-sacs or dead ends.

Diagonal Diverter – A partition that connects two diagonally opposite curbs, bisecting the intersection, to force motor vehicles to slow down and turn. A *traversable barrier* allows emergency vehicles, as well as bicyclists and pedestrians, to cross over.

Forced Turns – These are islands used on approaches to an intersection that force drivers to turn in only one direction (usually right).

Gateways – Also known as *entry treatments*; may involve alterations in the pavement surface, with bricks, stamped concrete, or other colored materials intended to signal to drivers that they are entering a neighborhood or community that requires lower speeds. Pillars and archways are sometimes used to complement gateways.

Half Closures - These are barriers that block travel in one direction for a short distance on an otherwise two-way street. Also called *semi-diverters*.

Median Barriers - These are narrow islands constructed between travel lanes through an intersection. They are intended to prevent left turns from the major street and through movements along the minor street.

Raised Crosswalk – A traditional pedestrian crossing area purposely raised above the normal pavement surface level in order to give motorist and pedestrians a better view of the crossing area.

Rumble Strips – Pavement surface treatments intended to cause drivers to experience vehicular vibrations signaling the drivers to slow down.

Speed Bumps – Narrow mountable obstructions installed on the pavement surface, across the traveled lanes, and intended to cause vehicles to slow. Speed bumps are usually less than 14 inches wide and 4 inches high.

Speed Humps – They are similar to speed bumps, but utilize larger vertical radii that result in wider widths and a more gentle crossing by vehicles.

Speed Tables – Wide mountable obstructions installed on the pavement surface across the travel lanes, and intended to cause vehicles to slow. They are similar to speed humps, except for the flat-topped section located between the approach and far edges. Speed tables are generally wider than speed humps and are more gentle on vehicles.

EFFECTIVENESS OF TRAFFIC CALMING MEASURES

The effectiveness of some of the traffic calming measures mentioned in this chapter in addressing problems involving volume, speed, traffic conflicts and emergency services are summarized in Table 2.

Table 2: Effectiveness of Typical Traffic Calming Measures

Traffic Calming Measures and Traffic Control Devices	Volume Reduction	Speed Reduction	Conflict Reduction	Emergency Response
Speed Bump	M	S	M	S
Speed Hump	M	S	M	S
Speed Table	N	M	N	M
Circle	M	M	S	S
Chicane	M	M	N	M
Raised Crosswalk	M	S	M	S
Raised Intersection	N	M	M	S
Neckdown	N	M	M	N
Chokers	N	M	M	M
Textured Pavement	N	N	N	N
Rumble Strip	N	M	N	M
Gateway	N	N	N	N
Pedestrian Refuge	N	M	M	N
Median Barrier	S	N	M	S
Street Closure	S	M	S	S
Diagonal Diverter	S	M	M	M
Forced-turn Island	M	N	M	M
Speed Limit Signing	N	M	N	N
Multi-way Stop Control	N	M	M	M
Turn Prohibitions	M	N	M	N
One-way streets	S	N	M	M

N = Minimal or no effect, M = Moderate effect, S = Significant effect.

A P P E N D I X B

TRAFFIC CALMING SCHEMATICS

THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

2000 14th Street, NW, 7th Floor
Washington, DC 20009

REQUEST FOR TRAFFIC CALMING STUDY

INTRODUCTION

The following is a request for a traffic calming study. The request will be processed according to procedures in the *District of Columbia Traffic Calming Policies and Guidelines*. Please complete both Part A and Part B.

A. STREET INFORMATION

Please provide the name(s) of the street(s) on which a study is requested as well as the boundaries of the street segment. (Note: Boundaries may change at DDOT's discretion).

Requested Street: _____ Traffic Problem(s): _____
From: _____ _____
To: _____ _____

B. CONTACT PERSON INFORMATION

Each request must provide a contact person who lives on the (or one of the) requested street segments or is an ANC representative. The contact person will receive all relevant correspondence and be responsible for gathering evidence of support when requested.

Name of Representative: _____ANC: _____

Address: _____

Zip Code: _____ Phone #:_____

I agree to be the contact person for the above request

Signature: _____ Date: _____

Evidence of support attached? ☐ Yes ☐ No

Does the ANC concur with this application? ☐ Yes ☐ No

THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

2000 14th Street, NW, 7th Floor
Washington, DC 20009

REQUEST FOR REMOVAL OF A TRAFFIC CALMING MEASURE

INTRODUCTION

The following is a request for the removal of a traffic calming measure(s). The request will be processed according to procedures in the *District of Columbia Traffic Calming Policies and Guidelines*. Please complete both Part A and Part B.

A. STREET INFORMATION

Please provide the name(s) of the street(s) on which the traffic calming measure is located.

Street Name(s):_____
From: _____
To: _____
Description/Type of Measure:_____

B. CONTACT PERSON INFORMATION

Each request must provide a contact person who lives on the (or one of the) requested street segments within the study area boundary or is an ANC representative. The contact person will receive all relevant correspondence and be responsible for gathering evidence of support when requested.

Name of Representative: _____ANC: _____

Address: _____

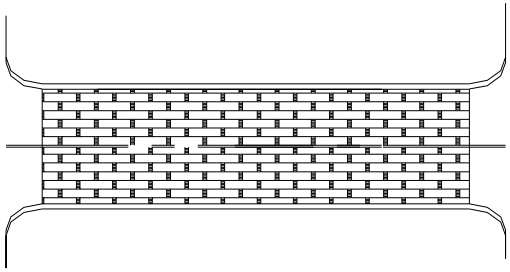
Zip Code: _____ Phone #:_____

I agree to be the contact person for the above request

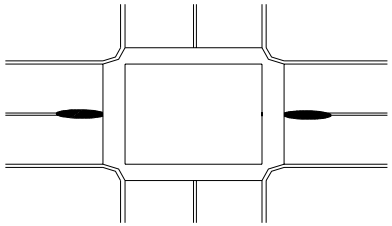
Signature: _____ Date: _____

Evidence of support attached? ☐ Yes ☐ No

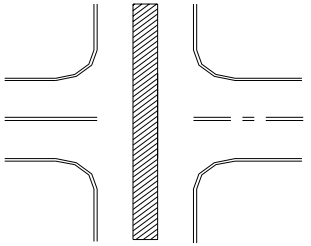
Does the ANC concur with this application? ☐ Yes ☐ No



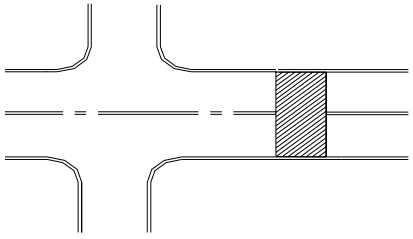
Textured Pavement



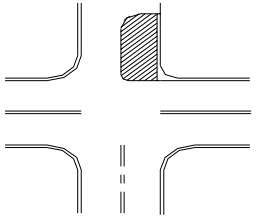
Pedestrian Refuges



Median Barrier



Full Closure



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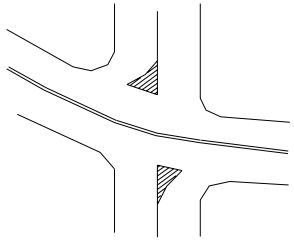
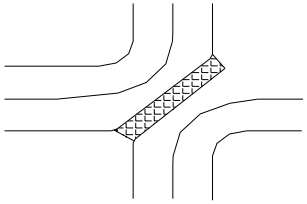
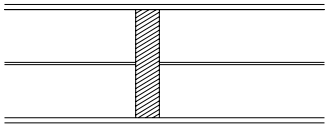


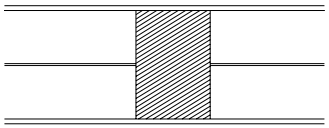
Forced Turn Island



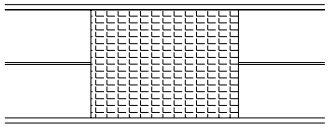
Diagonal Diverter



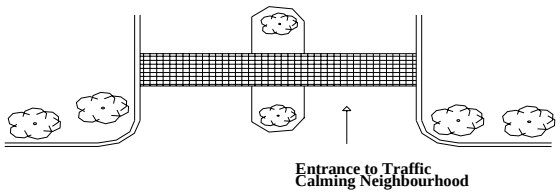
Speed Bump



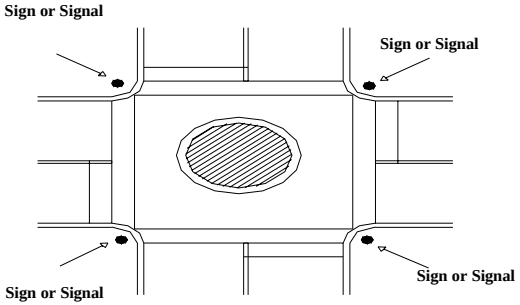
Speed Hump



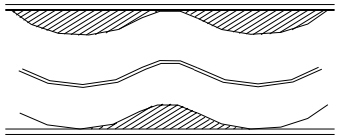
Speed Table



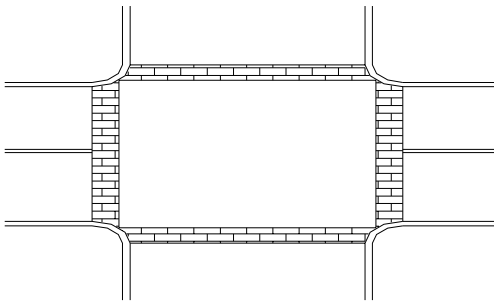
Gateway



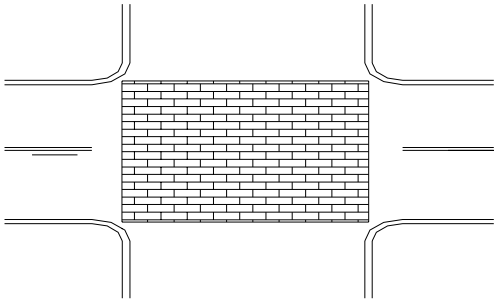
Traffic Circle



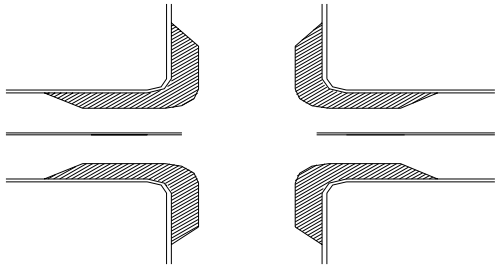
Chicane



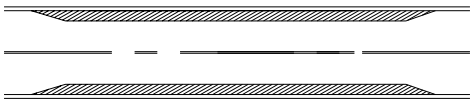
Raised Cross Walk



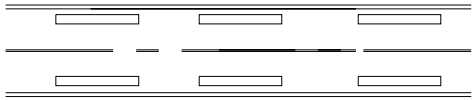
Raised Intersection



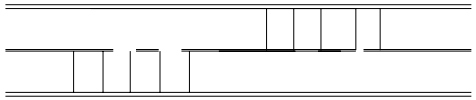
Neckdowns



Chokers



On - Street Parking



Rumble Strips